function
$$x = f(n)$$
 $x = 1;$

for $i = 1:n$

for $j = 1:n$

1 Ans: Inner loop: prices in and at all and of pools traver to

It executes n times for each phase in outer loop.

The Bus raw Fit

in executions for inner loop

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Outer loop!

It executes n times from i= 1 to i=n

... n executions for outer loop

To fal executions =
$$\sum_{i=1}^{n} \sum_{j=1}^{n} 1$$

= $\sum_{i=1}^{n} n$
= $n \times n$

... The total runtime of the algo is $O(n^2)$

3Ans: Big - 0 - Notation (Upper bound)

O(M2)-function does not grow faster than gundratic

Big-Omega

1 (n2) - function does not 9 sow slower than quadratic

Big-Theta

(9 (n²) - tunction grows a symptotically as n²

GAM: y=itj, actual time taken by the modified function will.

be slightly longer due to it.

.: O(n2) is the time Complexity.

5 Any It doesn't effect much in the time complexity que serve and a serve and

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Total sacrature 2

2 W X Y1

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